

Forensic Science II: Course Syllabus

Forensic Science II: More Secrets of the Dead

COURSE DESCRIPTION:

Although the crime scene represents the first step in solving crimes through forensic science, the crime laboratory plays a critical role in the analysis of evidence. This course focuses on the analysis of evidence and testing that takes place within this setting. We will examine some of the basic scientific principles and knowledge that guides forensic laboratory processes, such as those testing DNA, toxicology, and material analysis. Techniques such as microscopy, chromatography, odontology, entomology, mineralogy, and spectroscopy will be examined.

Unit 1: Drug Evidence

Objectives:

Upon completion of this unit, you will be able to:

- * Learn about some of the different types of drugs and their effects.
- * Examine some of the common ways that samples can be taken from humans to test for drugs.
- * Consider some of the issues in collecting and preserving drug evidence.
- * Investigate screening tests and their uses in criminal investigations.
- * Discuss confirmatory tests and their uses in criminal investigations.

ASSIGNMENTS:



Drug Evidence: Unit Text Questions	<i>Homework</i>	10 points
Drug Evidence: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 1 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 1 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 1 Quiz – Drug Evidence	<i>Quiz</i>	15 points

Unit 2: Forgeries and Document Examination

Objectives:

Upon completion of this unit, you will be able to:

- * **Learn about questioned documents and exemplars.**
- * **Examine some of the aspects that document examiners use to compare handwriting.**
- * **Investigate some of the aspects that document examiners use to compare typescript.**
- * **Discuss some of the ways that document alterations can be found.**
- * **Learn more about how document examiners find forgeries and counterfeit materials.**

ASSIGNMENTS:

Forgeries and Document Examination: Unit Text Questions	<i>Homework</i>	10 points
Forgeries and Document Examination: Online Forensic Science	<i>Homework</i>	10 points

II Lab Questions		
Unit 2 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 2 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 2 Quiz – Forgeries and Document Examination	<i>Quiz</i>	15 points

Unit 3: Forensic Toxicology

Objectives:

Upon completion of this unit, you will be able to:

- * **Learn what poisonous substances have been used in history.**
- * **Understand how poisons are absorbed and transmitted through the body.**
- * **Discuss techniques used by forensic scientists to identify poisons and other toxins.**
- * **Examine the collection and preservation of blood evidence.**
- * **Consider the role of toxicologists in criminal investigations.**

ASSIGNMENTS:

Forensic Toxicology: Unit Text Questions	<i>Homework</i>	10 points
Forensic Toxicology: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 3 Discussion Assignment 1	<i>Discussion</i>	5 points

Unit 3 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 3 Quiz – Forensic Toxicology	<i>Quiz</i>	15 points

Unit 4: Paint, Soil, and Other Trace Evidence

Objectives:

Upon completion of this unit, you will be able to:

- * Learn how protons, neutrons, electrons, and other aspects are used by forensic scientists to study trace evidence.
- * Learn about the nature of matter and its relationship to elements and compounds.
- * Consider the usefulness of various forms of trace evidence in investigating crimes.
- * Learn about different types of microscopes and how they work.
- * Examine some of the tests used to identify and compare trace evidence.

ASSIGNMENTS:

Paint, Soil, and Other Trace Evidence: Unit Text Questions	<i>Homework</i>	10 points
Paint, Soil, and Other Trace Evidence: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 4 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 4 Discussion Assignment 2	<i>Discussion</i>	5 points

Unit 4 Quiz – "Paint, Soil, and Other Trace Evidence"

Quiz

15 points

Forensic Science II Midterm Exam

Objectives:

Upon completion of this unit, you will be able to:

- * **Review information acquired and mastered from this course up to this point.**
- * **Take a course exam based on material from the first four units in this course (Note: You will be able to open this exam only one time.)**

ASSIGNMENT:

Forensic Science II Midterm Exam

Exam

50 points

Midterm Discussion Assignment

Discussion

5 points

Unit 5: Forensic Entomology

Objectives:

Upon completion of this unit, you will be able to:

- * **Define forensic entomology and its uses.**
- * **Learn about the history of forensic entomology.**
- * **Examine what insects and arthropods are common pieces of evidence in criminal investigations.**
- * **Investigate some of the tests used in forensic entomology.**
- * **Learn about studies into insect activity as they related to forensic science.**

ASSIGNMENTS:

Forensic Entomology: Unit Text Questions	<i>Homework</i>	10 points
Forensic Entomology: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 5 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 5 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 5 Quiz – Forensic Entomology	<i>Quiz</i>	15 points

Unit 6: Forensic Anthropology**Objectives:**

Upon completion of this unit, you will be able to:

- * Learn about the areas of forensic anthropology and forensic odontology.
- * Discuss the history of forensic anthropology and odontology.
- * Consider some of the characteristics of bones and teeth that provide forensic scientists with information about the person.
- * Examine some of the tests used in the area of forensic anthropology.
- * Investigate the use of forensic anthropology in the criminal justice system.

ASSIGNMENTS:

Forensic Anthropology: Unit	<i>Homework</i>	10 points
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Text Questions		
Forensic Anthropology: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 6 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 6 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 6 Quiz – Forensic Anthropology	<i>Quiz</i>	15 points

Unit 7: Digital Evidence

Objectives:

Upon completion of this unit, you will be able to:

- * **Understand the different parts of computers.**
- * **Discuss the areas of a computer where information can be retrieved.**
- * **Examine how internet activity can be traced.**
- * **Investigate how emails and other aspects can be traced and examined.**
- * **Consider how computer evidence can be collected and preserved.**

ASSIGNMENTS:

Digital Evidence: Unit Text Questions	<i>Homework</i>	10 points
Digital Evidence: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points

Unit 7 Discussion Assignment 1	<i>Discussion</i>	5 points
Unit 7 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 7 Quiz – Digital Evidence	<i>Quiz</i>	15 points

Unit 8: The Future of Forensic Science

Objectives:

Upon completion of this unit, you will be able to:

- * Consider how computers are being used in forensic science.
- * Discuss some of the recent advances in forensic techniques and testing.
- * Learn about how advances in other disciplines impact forensic science.
- * Examine some of current limitations of forensic science investigations.
- * Investigate some of the possible future changes in forensic science.

ASSIGNMENTS:

The Future of Forensic Science: Unit Text Questions	<i>Homework</i>	10 points
The Future of Forensic Science: Online Forensic Science II Lab Questions	<i>Homework</i>	10 points
Unit 8 Discussion Assignment 1	<i>Discussion</i>	5 points

Unit 8 Discussion Assignment 2	<i>Discussion</i>	5 points
Unit 8 Quiz – The Future of Forensic Science	<i>Quiz</i>	15 points

Forensic Science II Final Exam

Objectives:

Upon completion of this unit, you will be able to:

- * **Review information acquired and mastered from this course up to this point.**
- * **Take a course exam based on material from units five to eight in this course – the last four units. (Note: You will be able to open this exam only one time.)**

ASSIGNMENT:

Forensic Science II Final Exam	<i>Exam</i>	50 points
Class Reflection Discussion Assignment	<i>Discussion</i>	10 points